

AMENDMENTS TO THE SPECIFICATION

On page 1, lines 11- 12 after “CROSS REFERENCE TO RELATED APPLICATION”, replace the paragraph beginning on line 11 to line 12 with the following:

This application is a continuation in part of United States Application Serial Number 09/947,846, filed on 06 September 2001, now U.S. Patent No. 7,048,842.

On page 3, replace the paragraph beginning on line 16 to line 24 with the following:

There remains a need for a simple, safe method and apparatus for manufacturing chlorine dioxide to meet a wide variety of commercial and domestic uses, under a wide variety of situations. This need was substantially met via the filing of United States Patent Application Number 09/947,846, filed 06 September 2001, now U.S. Patent No. 7,048,842, directed to an Electrolysis Cell for Generating Chlorine Dioxide. Nevertheless, there remains a significant need to identify electrolysis devices and/or cells suitable for interface with common household appliances. Such electrolysis devices and/or cells can be used for upstream and/or downstream water purification and/or sanitization devices.

On page 17, after line 26 and before “Specific Embodiments”, please insert the following new paragraphs:

Example A

An electrolysis cell of the general design shown in FIG. 1 was used to convert an aqueous solution comprising sodium chlorite into an effluent solution comprising chlorine dioxide. The electrolysis cell had a pair of confronting electrodes having a passage gap of about 0.19 mm. The anode was made of ES300-titanium, coated with ruthenium oxide and iridium oxide. The cathode was made of 201 stainless steel. The dimensions of the planar electrodes were 75.2 mm long by 25.4 mm wide.

The aqueous feed solution was prepared by mixing 10 liters of de-ionized water with 62.6 gms technical grade sodium chlorite stock (80% active, Aldrich Chemical Company, Inc,

Milwaukee, Wis. 53233; Cat. No. 24415-5) with a stirring bar until dissolved, forming a 5000 ppm sodium chlorite salt solution. The aqueous feed solution was retained in a 15-liter glass container placed within a light-proof box and cooled to 5 degrees Celsius. A peristaltic pump metered the aqueous feed solution from the glass container through the electrolysis cell at a flow rate of 300 ml/minute. A direct current of 5.72 amps was applied across the electrodes by a DC power supply to provide a voltage potential of 4.5 volts across the electrolysis cell. The effluent solution was withdrawn from the electrolysis cell and analyzed. The effluent contained 109 ppm chlorine dioxide and 4871 ppm of un-reacted sodium chlorite, for a chlorite conversion of 2.9%.

The electrolysis cell of Example A was operated using an aqueous feed solution of either 100 or 500 ppm of sodium chlorite, made from de-ionized water. The electrolysis cell has a pair of confronting electrodes having a chamber gap of about 0.3 mm. The resulting chlorine dioxide concentration in the effluent stream is shown in Table A.

TABLE A

<u>Flow rate</u>	<u>Sodium Chlorite</u>	<u>Anode Area</u>	<u>Watts</u>	<u>Chlorine Dioxide</u>
100 ml/min	500 ppm	3 cm ²	0.11	0.77 ppm
100 ml/min	500 ppm	4.5 cm ²	0.32	1.79 ppm
100 ml/min	500 ppm	9 cm ²	0.54	2.58 ppm
100 ml/min	500 ppm	18 cm ²	1.04	4.81 ppm
400 ml/min	500 ppm	3 cm ²	0.11	0.57 ppm
400 ml/min	500 ppm	4.5 cm ²	0.29	0.72 ppm
400 ml/min	500 ppm	9 cm ²	0.50	1.02 ppm
400 ml/min	500 ppm	18 cm ²	1.01	1.81 ppm
100 ml/min	100 ppm	3 cm ²	0.04	0.14 ppm
100 ml/min	100 ppm	4.5 cm ²	0.11	0.32 ppm
100 ml/min	100 ppm	9 cm ²	0.22	0.41 ppm
100 ml/min	100 ppm	18 cm ²	0.43	0.74 ppm
400 ml/min	100 ppm	3 cm ²	0.04	0.09 ppm
400 ml/min	100 ppm	4.5 cm ²	0.07	0.12 ppm
400 ml/min	100 ppm	9 cm ²	0.14	0.19 ppm
400 ml/min	100 ppm	18 cm ²	0.36	0.30 ppm